

**REMARKS**

Reconsideration is requested.

Claim 1 states that the detector array consists of an arrangement of one or more groups wherein the groups consist of a sensing element and at least one variant thereof. This amendment is supported by the application as filed, for example, at page 16, lines 8-10. Claims 1 and 31 further define the biological sensing element as an isolated polypeptide or a fragment, truncation, domain or concatenation thereof. The claims are supported in this regard, for example, throughout the application as filed, such as at pages 15 and in the Examples. The expression of the biological sensing element in E.coli and the separation techniques described in Example 1 are also believed to support the claims. No new matter has been added.

Claims 1-8, 10-13, 15-20 and 22-50 are pending. Claims 32-50 have been withdrawn from consideration.

To the extent not obviated by the above amendments, the Section 102 rejection Claims 1-5, 10, 13, 20, 25-26 and 28-31 over Reed (U.S. Patent No. 6,492,143), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following distinguishing comments.

The applicants submit, with due respect, that there is no teaching in Reed of an arrangement of groups, wherein each group consists of a biological sensing element as presently recited in the claims and at least one variant thereof. The Examiner is understood to rely on col. 34, lines 58-67, of the cited patent as allegedly disclosing that the array of Reed comprises at least one group consisting of a biological sensing

element and at least one variant thereof. However, the cited passage of Reed is understood to merely state that the

“eighty plasmid clones arrayed in microtiter plates were pooled into ten groups of eight constructs each”.

There is no disclosure of an arrangement of one or more groups, but rather, at best, a statement that the clones were pooled.

Furthermore, the Examiner is understood to equate the expressed olfactory receptor of Reed with the biological sensing element of the present application. It is noted that the array of Reed “pools” plasmid clones into groups, not the expressed olfactory receptor, and is not understood to disclose or suggest the arrangement into groups of the sensing element itself and variants thereof, as is required by the presently claimed invention.

Further, the applicants do not believe that there is a teaching in Reed that the biological sensing element is an isolated polypeptide or a fragment, truncation, domain or concatenation thereof. As previously noted, the biological sensing element of Reed is a whole cell. There is no teaching or suggestion in Reed of the use of isolated polypeptides. In fact, the system of Reed would not function if the biological sensing element was an isolated polypeptide as the system of Reed is a whole cell assay.

Even with the Examiner’s interpretation of Reed, i.e., that the sensing element is an olfactory receptor translated from a nucleic acid from the nucleic acid library of the invention and expressed within the cell, which the applicants believe is an incorrect interpretation of the reference, the methodology of Reed requires that the nucleic acid is expressed within the cell and not that the expressed receptor is isolated and discretely

immobilized onto or within a solid support, as is required by the presently claimed invention.

Withdrawal of the Section 102 rejection of claims 1-5, 10, 13, 20, 25-26 and 28-31 over Reed is requested.

To the extent not obviated by the above amendments, the Section 102 rejection of claims 1-5, 13, 15, 20, 25-26, 28, 29 and 31 over Krautwurst (Cell, December 1998, 95:917-925), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following distinguishing comments.

The cited Krautwurst reference is understood to have been authored by named inventors of the Reed patent discussed above. The Krautwurst reference is further understood to be a prior publication of the group, and to provide no more than the cited Reed patent, which is distinguished above. Specifically, both Krautwurst and Reed are understood to be concerned with the expression of cloned olfactory receptors in heterologous systems to identify their corresponding ligands.

The Examiner is understood to believe that Krautwurst describes an array comprising one or more groups of broad specificity biological sensing elements and that each such group consists of a biological sensing element and at least one variant thereof. The present claims however specify that the detector array consists of an arrangement of groups, said arranged groups consisting of a broad specificity biological sensing element which is an isolated polypeptide or a fragment, truncation, domain or concatenation thereof, and at least one variant thereof. This arrangement and the isolated nature of the biological sensing element is not disclosed or suggested however by Krautwurst, wherein the plasmids comprising the nucleic acid encoding the olfactory

receptor are believed to be contained and expressed within HEK-293 cells, with the result that the sensing elements are not isolated and are "pooled" into groups rather than specifically arranged within appropriate groups, as required by the presently claimed invention.

Withdrawal of the Section 102 rejection of claims 1-5, 13, 15, 20, 25-26, 28, 29 and 31 over Krautwurst is requested.

To the extent not obviated by the above amendments, the Section 102 rejection of claims 6-8 over Reed "as defined by Dal Monte (Chemical Senses, 1993, 18(6):713-721)" (see, pages 6-7 of the Office Action dated December 20, 2004) is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following distinguishing comments.

The Examiner is requested to see the above comments relating to Reed. Specifically, Reed is believed to not describe an isolated biological sensing element nor provide an arrangement of one or more groups, said arranged groups consisting of a broad specificity biological sensing element and at least one variant thereof. "Defining" Reed "by Dal Monte" is not believed to cure these deficiencies.

Withdrawal of the Section 102 rejection of claims 6-8 over Reed "as defined by Dal Monte (Chemical Senses, 1993, 18(6):713-721)" is requested.

To the extent not obviated by the above amendments, the Section 103 rejections of claims 11-12, 15-19 and 22-24 over Reed in view of Hoffman (U.S. Patent No. 5,998,588), and claim 27 over Reed and Gold (U.S. Patent No. 6,242,246), are traversed. Reconsideration and withdrawal of the rejections are requested in view of the above and the following distinguishing comments.

Reed neither teaches nor suggests, for example, a detector array of the claimed invention. Moreover, there is nothing that Hoffman or Gold can add that would have caused the disclosure of Reed to render the present claims obvious. The Examiner is requested to further see the remarks of record with regard to the combined teachings of Reed in view of Hoffman and Reed in view of Gold.

The claims are submitted to be patentable over Reed in view of Hoffman and Reed in view of Gold. Withdrawal of the Section 103 rejections of claims 11-12, 15-19 and 22-24 over Reed in view of Hoffman and claim 27 over Reed in view of Gold, are requested.

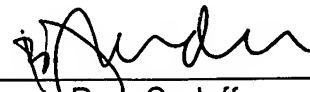
The claims are submitted to be in condition for allowance and a Notice to that effect is requested.

Acceptance of the drawings are also requested.

Respectfully submitted,

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